CLAIMS

What is claimed is:

1. A control signal for controlling a means for correction of at least one electron beam that scans a screen line by line, the control signal comprising:

an amplitude of which varies along each line according to a first curve of a first type determined by a plurality of line parameters, each of the plurality of line parameters generated according to a second curve of the first type determined by a plurality of column parameters.

2. The control signal of claim 1 wherein each of the first and second curves of the first type comprises the addition of:

a constant level, determined by a first parameter,

two half X^n curves, where n is any predetermined value, located on either side of the center of the curve, the common origin of the half X^n curves located at the center of the curve and the maximum values of the half X^n curves at the ends of the line determined by a second and a third parameter respectively, and

a double-top curve with a continuous derivative, formed by at least two humps placed end to end and located on either side of the line center, each hump having a null derivative at its top, and each minimum or maximum value of the curve set by a respective distinct parameter.

3. The control signal of claim 2 wherein the double-top curve has a zero value and a null derivative at its center.

4. The control signal of claim 2 wherein the double-top curve has a zero value and a null derivative at its ends.

5. The control signal of claim 1, determined, for each line, by five line parameters.

6. The control signal of claim 1 wherein each line parameter varies according to the second curve determined by five column parameters.

7. A device for adjusting the convergence of three parallel electron beams, comprising:

a group of horizontal convergence correction coils and a group of vertical convergence correction coils, each group controlled by a control signal of claim 1.

8. A device for correcting the luminance of a screen, comprising:

means for generating at least one electron beam of controllable intensity, the intensity of the electron beam corrected by a control signal of claim 1.

9. A circuit for generating a control signal of claim 1, comprising:

a first calculator adapted to generating the control signal based on a predetermined number of line parameters, synchronized with a screen line scanning signal, and

at least one second calculator adapted to generating the line parameters of each line of the screen based on a predetermined number of column parameters, synchronized with a vertical screen scanning signal.

10. A method of generating a control signal for correcting at least one electron beam that scans a screen line by line, the method comprising:

determining a plurality of column parameters;

generating a plurality of column curves from the respective plurality of column parameters;

generating a plurality of line parameters from each of the plurality of column curves, respectively; and

generating a control signal for correcting the location of the electron beam as it scans the screen line by line, the amplitude of the control signal varying along each line according to a plurality of line curves generated from the respective plurality of line parameters.

11. The method of claim 10 wherein generating the plurality of line parameters comprises varying the line parameters from one line to another according to the plurality of column curves.

12. The method of claim 10, wherein generating the plurality of column curves and the plurality of line curves comprises:

adding together the following curves:

a constant level curve determined by a first line parameter of the plurality of line parameters;

two half X^n curves, joined together at a common origin forming a center with the maximum values of each half X^n curve at the ends of the joined curves determined by a second and a third parameter, respectively, where n is a predetermined value; and

a double-top curve having a continuous derivative and formed by at least two humps placed end to end and located on either side of a center of the double-top curve, each hump having a null derivative at its top and each minimum or maximum value of the double-top curve set by a respective distinct parameter.

13. The method of claim 12, comprising generating the double-top curve to have a zero value and a null derivative at its center.

14. The method of claim 12, comprising generating the double-top curve to have a zero value and a null derivative at its ends.

15. The method of claim 10 wherein the plurality of column parameters comprises five column parameters for each line, and the plurality of line parameters comprises five line parameters for each line.

16. A device for adjusting the convergence of three parallel electronic beams that scan a screen line by line, the device comprising:

a group of horizontal convergence correction coils and a group of vertical convergence correction coils; and

a circuit for generating a control signal to the group of horizontal convergence correction coils and a group of vertical convergence corrections coils, the control signal generating circuit comprising:

a first calculator adapted for generating a control signal based on five line parameters synchronized with a screen line scanning signal; and

at least one second calculator adapted to generate the line parameters of each line of the screen based on a predetermined number of column parameters synchronized with a vertical screen scanning signal.

17. The device of claim 16 wherein the control signal generating circuit is configured to generate a control signal for each electron beam, the control signal having an amplitude that varies along each line according to a first curve of a first type determined by a plurality of line parameters, each of the plurality of line parameters generated according to a second curve of the first type determined by column parameters.

18. The device of claim 17 wherein the first curve is determined by five line parameters and the second curve is determined by five column parameters.

19. The device of claim 17 wherein the control signal generating circuit is configured to generate each of the first and second curves of the first type by adding a first curve of the second type of a constant level determined by the first line parameter, a second curve of

the second type comprising two half X^n curves joined together at a common origin to form a center of the second curve of the second type, the common origin of each half X^n curve located at the center of the second curve of the second type, and the maximum values of the half X^n curves at the ends of the second curve of the second type determined by second and third parameters, respectively, and a third curve of the second type comprising a double-top curve with a continuous derivative formed by at least two humps placed end to end and located on either side of a center point of the third curve of the second type, each hump having a null derivative at its top and each minimum or maximum value of the double-top curve set by a respective distinct parameter.